

Table 1

| | Fish given oil globules embedding antigen | | Controls | |
|---------|--|---------|---------------------|---------|
| Fish | Agglutination titer | | Agglutination titer | |
| | Group-1 | Group-2 | Group-3 | Group-4 |
| Fish 1 | 256 | 32 | 16 | 4 |
| Fish 2 | 1024 | 1024 | 16 | 2 |
| Fish 3 | 64 | 256 | 2 | 8 |
| Fish 4 | 64 | 128 | 64 | 16 |
| Fish 5 | 32 | 256 | 4 | 32 |
| Fish 6 | 256 | 128 | | 2 |
| Fish 7 | 128 | 1024 | | 2 |
| Fish 8 | 128 | 1024 | | 16 |
| Fish 9 | 128 | 256 | | 16 |
| Fish 10 | 256 | 32 | | 64 |

1) 3000 fish a group

2) Group-1 10% feed oil + formalin-killed *Edwardsiella tarda* (10^9 cfu/ml)

3) Group-2 1% feed oil + formalin-killed *Edwardsiella tarda* (10^7 cfu/ml)

4) Group-3 negative control (normal fish)

5) Group-4 Given with a mixture of bacteria, feed oil and emulsifier

6) Titer was examined in 3 weeks after final given

7) Water temperature : 23-25°C

Table 2

| | | Fish given oil globules embedding inactivated cells | | Comparative Example | |
|----------------------|----|---|------|----------------------|----|
| Antibody titer | | Fish 1 | 1024 | Fish 1 | 2 |
| | | Fish 2 | 1024 | Fish 2 | 4 |
| | | Fish 3 | 256 | Fish 3 | 2 |
| | | Fish 4 | 32 | Fish 4 | 16 |
| | | Fish 5 | 64 | Fish 5 | 16 |
| | | The number of deaths | | The number of deaths | |
| Days after injection | 7 | 0 | | 0 | |
| | 8 | 0 | | 0 | |
| | 9 | 0 | | 1 | |
| | 10 | 0 | | 4 | |
| | 11 | 1 | | 1 | |
| | 12 | 1 | | 0 | |
| | 13 | 3 | | 1 | |
| | 14 | 0 | | 3 | |
| Death rate | | 50% | | 100% | |